## Instructions for Operating

## No. 282 PORTAL GANTRY CRANE

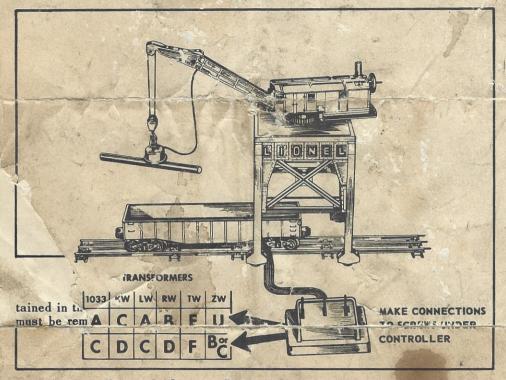


Figure - 1 - Operating Position of the No. 282 Crane

No. 282 Gantry Crane performs all of the operations of a real railroad crane. It is equipped with an electromagnet which can load and unload iron and steel. If you want to use the "big hook" alone to lift freight slings and other non-magnetic loads, take off the electro-magnet and hang it out of the way on the cross-bar at the center of the boom. To facilitate operations in a busy dock or steel yard the crane is provided with wheels so that it can be moved from place to place on its own rails. The legs of the crane are designed to span a single line of regular "0" or "027" track and to give clearance to all Lionel rolling stock. To get greater "reach" the position of the boom can be adjusted by turning the hand wheel in the back of the cab.

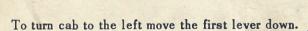
The operating voltage of No. 282 Gantry Crane is 12 to 16 volts. Electrical connections are made by running two wires from the appropriate transformer posts to the two terminal screws on the bottom of the controller.

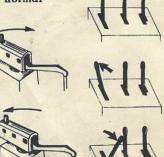
#### OPERATION OF THE CRANE

Just as with a real crane, accurate spotting of the hook requires practice. To operate the crane two hands must be used, with the left hand controlling the crane motor and the right hand controlling the kind of motion desired — either rotation of the cab, or hoisting of the hook.

The lever on the left is the motor control. At the normal center position the motor is off.

To turn cab to the right move the first lever up.





The center lever operates a mechanism which shift the motor from the cab to the "big hook." To change the action from rotation to hoisting move the center lever up.

To raise the hook move the first and second levers up.



To lower the hook move the first lever down and the second lever up.

Here's a useful hint: When you are raising or lowering the hoo! stop it accurately, first let go the motor lever, then let go the holsting rever. If you do this in reverse order the "coasting" of the motor will move the cab out of the desired position.

NOTE: If you continue the downward motion of the hook past its lowest point, the string lowering the hook will first unwind to its full length and then begin to rewind on its spool in the opposite direction. This will have the effect of reversing the "UP" and "DOWN" designations on the controller panel.

The lever on the right controls the electro-magnet. In the normal central position of this lever, the electromagnet is off. When the lever is moved up and to the right -- into its "Hold" slot -- the electromagnet will become energized and will pick up its steel or iron load. The electromagnet



lever does not snap back into its "off" position automatically but must be moved back by hand. DO NOT ALLOW the electromagnet to remain on for too long a time or it will overheat.

#### SERVICE INFORMATION

In common with all fine mechanical equipment Lionel No. 282 Gantry Crane deserves good care and should be cleaned and lubricated periodically according to illustration in Figure 3. Do not over-lubricate -- a dab of grease or a drop of oil, properly applied, is all that is necessary.

Lionel lubricant should be used on the worm shaft of the motor and its mating gear. The main shaft should receive a fine coat of light machine oil. The nylon gears should not be lubricated at all. The motor brushes and commutator should be cleaned and lubricated when necessary according to the general directions con-

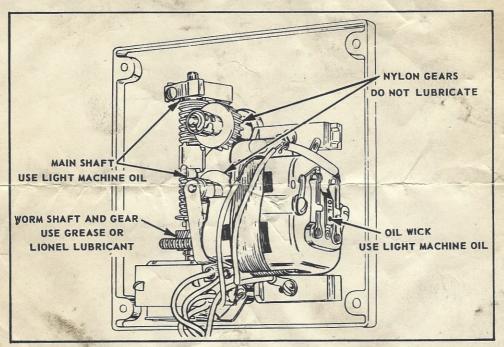


Figure 3 - How to Lubricate No. 282 Gantry Crane. In This Illustration the Mechanism Has Been Removed from the Structure for Clarity.

tained in the instruction booklet. In order to get at the motor the entire mechanism must be removed from the tower structure by removing four screws in the corners of the mechanism base.

A complete Lubrication and Maintenance Kit No. 927, containing all the necessary materials, is available at your Lionel dealer for \$1.75, or may be obtained by mail from the Lionel Service Department.

#### LIONEL WARRANTY

Like all Lionel products this crane has been inspected at the Factory prior to shipment and is guaranteed against faulty material and workmanship to the extent that if any such defective crane is returned to the Lionel Service Department or to any Lionel Authorized Service Station within a year of the date of purchase it will be repaired or replaced. If in the future this crane should ever require servicing or repair work, you may either send it to the Factory Service Department or take it to your nearest Authorized Service Station.

If you decide to mail the crane to us be sure to pack it carefully to avoid damage in transit. Use the original box, if possible, and enclose in another corrugated box or strong container. A letter in a stamped envelope stating fully the service desired must be pasted to the outside wrapper. Post Office regulations do not permit a letter or any written instructions to be placed inside the package.

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